METHOD FOR FORMING DUAL WORKFUNCTION HIGH-PERFORMANCE SUPPORT MOSFETs IN EDRAM ARRAYS

ABSTRACT OF THE DISCLOSURE

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Methods of preparing dual workfunction high-performance support metal oxide semiconductor field effect transistor (MOSFETs)/embedded dynamic random access (EDRAM) arrays are provided. The methods describe herein reduce the number of deep-UV masks used in forming the memory structure, decouple the support and

10   arraying processing steps, provide salicided gates, source/drain regions and bitlines, and provide, in some instances, local interconnects at no additional processing costs. Dual workfunction high-performance support MOSFETs/ EDRAM arrays having a gate conductor guard ring and/or local interconnections are also provided.